

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No : 10/620,038
Applicant : Shimek et al.
Filed : July 15, 2003
Title : Soft Dried Marshmallow and Method of Preparation

TC/A.U. : 1794
Examiner : Bekker, Kelly Jo

Docket No. : 6126US

APPLICANT'S APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Applicant of the above-identified U.S. patent application submits this Appeal Brief in support of an appeal from the January 12, 2009 final rejection of claims 1, 3-27, 29-39 and 81 in this application. Please charge the required fee under 37 C.F.R. § 1.117(f) to Deposit Account No. 07-0900.

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E. Whether claims 37 and 39 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of Zietlow et al. ('216), Igoe and U.S. Patent No. 4,251,561 to Gajewski.

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C. Whether claims 16-18, 21, 23, 25, 26 and 33 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of U.S. Patent No. 6,207,216 to Zietlow et al.

D. Whether claims 34 and 35 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of Zietlow ('216) and The Dictionary of Food Ingredients, 4th Edition, to Igoe.

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I. REAL PARTY IN INTEREST

The above-identified patent application was assigned to General Mills IP Holdings II, LLC on March 2, 2005, which was recorded at the U.S. Patent and Trademark Office on Reel No. 015820, Frame No. 0317.

II. RELATED APPEALS AND INTERFERENCES

There does not exist any known related appeals or interferences that would directly affect or be directly affected by or have a bearing on the decision in this case.

III. STATUS OF CLAIMS

Presently, claims 1, 3-27, 29-39 and 81 stand rejected. The rejected claims are herewith appealed.

IV. STATUS OF AMENDMENTS

No amendments to the claims have been made following the final rejection mailed in the Office Action of January 12, 2009.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 is directed to a dried soft aerated confection food product, comprising: about 65 to 98% of a saccharide component, about 0.05 to 15% of a foaming agent, about 0.5 to 20% of a structuring agent, 1-10% moisture and at least one color. See page 3, line 14 through page 4, line 8. The food product has a density of about 0.1 to 0.35 g/cc and a water activity of about 0.1 to 0.4. See page 9, lines 2-17. Additionally, about 5-25% of a softening agent is added to provide a glass transition temperature of less than 5°C and a springback factor of a minimum of 20% and up to 50%. See page 8, lines 7-20 and page 14, lines 17-24.

Claim 5 further distinguishes claim 1 by requiring a glass transition temperature of less than -10°C. See page 8, line 10.

Claim 7 also depends from claim 1 and further requires a food product having the ability of a 500³ cm quantity to compress to 50-85% of the original volume in five minutes due to the force imparted by a 1 kg weight. See page 14, lines 18-24.

Claim 9 depends from claim 7 and further requires that the saccharide component has a majority of sucrose, and that the food product contains about 0.5 to 10 gelatin, about 2 to 10% moisture and has a fat content of less than 5%. See page 18, lines 9-18.

Claim 10 depends from claim 8 and further requires that the food product is in the form of shaped pieces each weighing about 0.1 to 10g. See page 3, line 13.

Claim 16 depends from claim 15 and further requires that the food product wherein the at least one ingredient constitutes a nutritional fortifying ingredient selected from the group consisting of biologically active components, fiber, micronutrients, minerals and mixtures thereof. See page 9, line 23 through page 10, line 5.

Claim 19 depends from claim 1 and further requires that the food product has a second color. See page 9, lines 23-32.

Claim 20 depends from claim 1 and further requires that the food product is in the form of a phase or portion of a composite food product. See page 9, lines 23-32.

Claim 21 depends from claim 20 and further requires that the portion is in the form of a topical coating. See page 14, line 28.

Claim 33 depends from claim 8 and further requires that the food product additionally comprise a high potency sweetener. See page 12, lines 28-32.

Claim 34 depends from claim 33 and further requires that the high potency sweetener includes sucralose. See page 13, lines 7-10.

Claim 36 depends from claim 1 and further requires that the food product be an admixture with a ready-to-eat cereal. See page 14, lines 31-33.

Claim 37 depends from claim 29 and further requires that the gelatin be 250 Bloom strength. See page 7, lines 21-22.

Claim 81 depends ultimately from claim 1 and further requires a bulk compressibility factor of 50-85%. See page 14, lines 21-23.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 1, 3-9, 14, 15, 32, 38 and 81 stand properly rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent Application Publication No. 2004/0109933 to Roy et al.

B. Whether claims 10-13, 19, 20, 22, 24, 27, 29-31 and 36 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of U.S. Patent No. 6,309,686 to Zietlow et al.

C. Whether claims 16-18, 21, 23, 25, 26 and 33 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of U.S. Patent No. 6,207,216 to Zietlow et al.

D. Whether claims 34 and 35 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of Zietlow et al. ('216) and The Dictionary of Food Ingredients, 4th Edition, to Igoe.

E. Whether claims 37 and 39 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of Zietlow et al. ('216), Igoe and U.S. Patent No. 4,251,561 to Gajewski.

VII. ARGUMENTS

A. Whether claims 1, 3-9, 14, 15, 32, 38 and 81 stand properly rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent Application Publication No. 2004/0109933 to Roy et al.

1) **Claims 1, 3, 4, 6, 8, 9, 14, 15 and 38**

a) The Examiner's refusal to accept the February 27, 2008 Affidavits and evidence in support of the Affidavits submitted October 23, 2008 under 37 C.F.R. § 1.131 was in clear error.

As set forth in M.P.E.P. § 715, when any claim of an application is rejected, the inventor of the subject matter of the rejected claim may submit an appropriate oath or declaration to establish invention of the subject matter of the rejected claim prior to the effective date of the reference. The showing of facts necessary to establish such prior invention shall be such, in character and weight, as to establish reduction to practice prior to the effective date of the reference. Original exhibits of drawings or records, or photocopies thereof, must accompany and form part of the affidavit or declaration or their absence must be satisfactorily explained. See 37 C.F.R. § 1.131.

Affidavits filed by the Applicant on February 27, 2008 provided an appropriate declaration from inventors Susan L. Kamper and James W. Geoffrion that establishes invention of the subject matter of claim 1 prior to the effective date of U.S. Patent Application Publication No. 2004/0109933 to Roy et al. (i.e., October 31, 2003). In particular, Susan L. Kamper states that samples of the claimed product were tested in the summer of 2002, while James W. Geoffrion confirms that the claimed product was

reduced to practice and slated for consumer testing in 2002. Further evidence of the reduction to practice was provided, also in affidavit form, in the response of October 23, 2008, and will be discussed in more detail below.

Claim 1 of the present invention is directed to a dried soft aerated confection comprising:

- about 65%-98% of a saccharide;
- about 0.05-15% of a foaming agent;
- about 0.5-20% of a structuring agent;
- 1-10% moisture;
- at least one color;
- a density of about 0.1-0.35g/cc;
- a water activity from about 0.1-0.4;
- about 5-25% of a softening agent to provide a glass transition temperature of less than 5°C; and
- a springback factor of a minimum of 20%-50%.

By way of example, page 2 of the prior submitted evidence shows a marbit batch produced on April 17, 2002 including a base slurry (11340 grams) having about 77% sugar (from a sugar slurry). The marbit also included hydrated gelatin (foaming and structuring agent) at 6.05% of the base slurry, and a moisture level of between 1.16 and 12.9 as shown on page 4 of the submitted evidence. With respect to the at least one color requirement, it is noted that the specification specifically notes that "By 'color' it is meant a confection of any color, including white, which may be provided by the base confection ingredients..." See page 9, lines 23-32 of the application. Pages 5-6 of the evidence discuss the physical characteristics of the marbit, i.e., soft or chewy at low water activity. Although claim 1 requires a specific density and springback factor range, these requirements are simply ways to quantify the qualities discussed in the inventor's journal, which are more precise for purposes of patent claims, but which mean the same thing, i.e., soft and chewy at low moisture levels. The water activity levels shown on page 4 of the evidence range from 0.101-0.071. Glycerin (softening agent) was added to the

mixture at 6.7-15% as shown on page 3 of the evidence. Thus, each of the requirements met by claim 1 are demonstrated in the marbit batch example of April 17, 2002.

The Examiner rejected the § 1.131 affidavits and accompanying evidence because, according to the Examiner, the affidavits do not “establish possession of whole invention as claimed or something falling within the claim (such as a species of a claimed genus) . . .” See page 4, paragraph 3 of the January 12, 2009 Office Action. More specifically, the Examiner states that the affidavit does not include a marbit that *does not require fat* and that comprises 0.05 – 15% foaming agent, 0.5-20% structuring agent, moisture content of 1-10%, and water activity of .1-.5 and/or 5-25% of a softening agent as instantly claimed.

The Applicant respectfully submits that the Examiner's position is in clear error. Currently, claim 1 *can* include fat since the claim is open ended (i.e., uses the transitional word “comprising”). Therefore, it is improper for the Examiner to require the affidavit to show an example without fat in order to establish a reduction to practice of the present invention. It does not make sense that the Examiner is mandating the evidence to show what the product of the invention does not require. Additionally, the Examiner alleges that the water activity of the disclosed marbit is 0.25. Actually, the affidavit references marbits having a water activity between 0.101 and 0.171, while referencing that the cereal can have a water activity of 0.25. Regardless, the water activity required in claim 1 ranges from about 0.1 to about 0.4, such that the marbit in the Applicant's example falls within the claimed range. Certainly, the Examiner's earlier requirement of possession of at least a species of a claimed genus is met by the marbit example provided.

As set forth in M.P.E.P. § 715.07, the ultimate issue is whether the evidence is such that one of ordinary skill in the art would be satisfied to a reasonable certainty that the subject matter necessary to antedate the reference possessed the alleged utility. *In re Blake*, 358 F.2d 750, 149 USPQ 217 (CCPA 1966). Respectfully, the Applicant submits that the evidence produced in combination with the inventor's sworn statements is

beyond sufficient to prove reduction to practice before the critical date such that Roy et al. is not effective prior art.

b) The Examiner has failed to provide a single reference which teaches each and every limitation of claim 1.

On page 2 of the January 12, 2009 Office Action, the Examiner incorporated by reference the rejection set forth in the January 14, 2008 Office Action. In turn, the January 14, 2008 Office Action incorporates by reference the rejection set forth in the April 24, 2007 Office Action. Of course, the reasoning in the April 24, 2007 Office Action has been explained in the Advisory Actions of March 17, 2008 and March 25, 2009. Therefore, unless otherwise noted, reference to "the Office Action" should be understood to mean the April 24, 2007 Office Action as modified by the advisory actions.

Unlike prior art aerated confections or marbits, the present invention provides a dried yet soft product. Importantly, the present invention provides for a marshmallow that is dried and shelf stable, but is also soft in texture, even when immersed in a cold fluid. The novel physical aspects of the present invention are quantified using glass transition temperature (T_g) and springback factor limitations. As is known in the art, aerated confections are relatively soft and pliable above their specific T_g, and typically have a firm or hard texture below their T_g. In support of these facts, see, for example, U.S. Patent No. 6,387,432, column 3, lines 18-23. The softness of an aerated confection can also be evaluated using a bulk compression test to provide a springback factor, or the percentage of lost volume recovered after the confection is compressed. See paragraph 0053 of the present application.

On page 6 of the Office Action, the Examiner rejects claim 1 as being anticipated by Roy et al. However, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987). A prior art reference *may* anticipate when the claim limitations not expressly found in

that reference are nonetheless inherent in it. However, "Inherency...may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient." *In re Oelrich*, 666 F.2d 578,581 (CCPA 1981). See also *Ex parte Skinner*, 2 USPQ2d 1788, 1789 (BPAI 1986).

Roy et al. does not teach the glass transition temperature or springback factor required in claim 1. On page 7 of the Office Action, the Examiner states that, "[s]ince Roy teaches a *similar confection* with the instantly claimed softening agent within the instantly claimed range, it would be expected that Roy inherently teaches of a product that has a glass transition temperature and springback factor as instantly claimed." Emphasis added. The Examiner's argument does not provide an adequate basis to support the finding that Roy et al. possesses the same characteristics as the claimed invention. Additionally, it should be noted that Roy et al. utilizes sodium hexametaphosphate, a gel stiffening agent, as well as high levels of fruit solids. As the Examiner noted, the subject specification does teach using calcium hexametaphosphate as a source of calcium. See paragraph 42. However, it is not a preferred source of calcium and of course it is not sodium hexametaphosphate, a gel stiffening agent. Additionally, while the subject application does allow for the addition of a portion of the saccharide component supplied by fruit based products, see paragraph 22, the subject application does not teach using high levels of fruit solids.

Claim 1 requires a density of about 0.1-0.35 g/cc (or g/ml), which equals approximately 0.83-2.92 pounds per gallon, and a moisture content of 1-10%. On page 6 of the Office Action, the Examiner notes that Roy et al. teaches a marbit having a moisture content of 1-5%. Additionally, Roy et al. discusses a mixture having a density of 1.5-4 pounds per gallon (approximately 0.17-0.48 g/cc). See paragraph 007. However, the density set forth in Roy is 1.5-4 pounds per gallon before extrusion, and if marbits are being made, the cut extruded pieces having a moisture content of 10-30% are sent to a dryer to form a marbit having a final moisture of 1-5%. Thus, the final density of the marbits in Roy et al. after drying will necessarily be greater than the density of the wet extruded mix (as the moisture content is reduced by at least half).

Roy et al. does not teach, or inherently describe, a soft dried aerated confection including the required springback factor or glass transition temperature, and only describes a density which falls within the required range in reference to a wet mixture having a moisture content of 10-30%. Therefore, the Examiner has failed to meet his burden of proof under § 102.

2) **Claim 5**

The Examiner has failed to provide a single reference which teaches a dried soft aerated confection food product according to claim 1, further having a glass transition temperature of less than -10°C as set forth in claim 5.

As is known in the art, aerated confections are relatively soft and pliable above their specific Tg, and typically have a firm or hard texture below their Tg. A novel aspect of the present invention is its ability to stay soft even in very cold milk. More specifically, the present invention stays soft and pliable even at temperatures of -10°C. Roy et al. does not either expressly or inherently describe a dried aerated confection having such an attribute. Instead, on page 7 of the Office Action, the Examiner states that "Since Roy teaches *a similar confection* with the instantly claimed softening agent within the instantly claimed range, it would be expected that Roy inherently teaches of a product that has a glass transition temperature and springback factor as instantly claimed." Emphasis added. Additionally, it should be noted that Roy et al. utilizes sodium hexametaphosphate, a gel stiffening agent, as well as high levels of fruit solids. As the Examiner noted the subject specification does teach using calcium hexametaphosphate as a source of calcium, see paragraph 42, it is not a preferred source of calcium and of course it is not sodium hexametaphosphate, a gel stiffening agent. Additionally, while the subject application does allow for the addition of a portion of the saccharide component can be supplied by fruit based products, see paragraph 22, the subject application does not teach using high levels of fruit solids. Regardless, the Examiner's argument does not provide an adequate basis to support the finding that Roy

et al. possesses the same characteristics as the claimed invention, such that claim 5 is not anticipated by Roy et al.

3) **Claims 7 and 32**

The Examiner has failed to provide a single reference which teaches a dried soft aerated confection food product according to claim 1, further having the ability of a 500 cm³ quantity to compress to 50-85% of the original volume in 5 minutes due to the force imparted by a 1 kg weight.

A novel aspect of the present invention is the ability of a dried aerated confection to remain soft, as demonstrated by the compression characteristics required in claim 5, rather than crisp and hard. Roy et al. does not either expressly or inherently describe a dried aerated confection having such an attribute. Instead, on page 7 of the Office Action, the Examiner states that, "Since the composition as taught by Roy *is similar* to the one as instantly claimed by applicant, and since both products were aerated to similar degrees, it would be expected that Roy inherently teaches a product that has the same compressibility and bulk compressibility as instantly claimed." Emphasis added. The Examiner's assumption disregards the fact that Roy et al. requires "high levels of fruit solids" as well as sodium hexametaphosphate as a gel-stiffening agent. As the Examiner noted, the subject specification does teach using calcium hexametaphosphate as a source of calcium, see paragraph 42. However, it is not a preferred source of calcium and of course it is not sodium hexametaphosphate, a gel stiffening agent. Additionally, while the subject application does allow for the addition of a portion of the saccharide component to be supplied by fruit based products (see paragraph 22) the subject application does not teach using high levels of fruit solids. Regardless, the Examiner's argument simply does not provide an adequate basis to support the finding that Roy et al. possesses the same characteristics as the claimed invention, such that claim 7 is not anticipated by Roy et al.

4) Claim 9

The Examiner's refusal to accept the February 27, 2008 Affidavits and evidence in support of the Affidavits submitted October 23, 2008 under 37 C.F.R. § 1.131 was in clear error.

As set forth in M.P.E.P. § 715, when any claim of an application is rejected, the inventor of the subject matter of the rejected claim may submit an appropriate oath or declaration to establish invention of the subject matter of the rejected claim prior to the effective date of the reference. The showing of facts necessary to establish such prior invention shall be such, in character and weight, as to establish reduction to practice prior to the effective date of the reference. Original exhibits of drawings or records, or photocopies thereof, must accompany and form part of the affidavit or declaration or their absence must be satisfactorily explained. See 37 C.F.R. § 1.131.

The Examiner explicitly argues that the affidavits are not acceptable because they mention fat and the claims at issue do not mention fat. Claim 9 depends from claim 7 and further requires that the majority of the saccharide component is sucrose, and that the food product contains about 0.5 to 10% gelatin, about 2 to 10% moisture and has a fat content of less than 5%. Since claim 9 specifically recites fat, the Examiner's argument on this point simply does not apply.

5) Claim 81

The Examiner has failed to provide a single reference which teaches a dried soft aerated confection food product according to claim 1, having a bulk compressibility factor of 50-85% as required by claim 81.

A novel aspect of the present invention is the ability of a dried aerated confection to remain soft, even though dry, as demonstrated by the compression characteristics set forth in claim 81. Roy et al. does not either expressly or inherently describe a dried

aerated confection having such an attribute. Instead, on page 7 of the Office Action, the Examiner states that, "Since the composition as taught by Roy *is similar* to the one as instantly claimed by applicant, and since both products were aerated to similar degrees, it would be expected that Roy inherently teaches a product that has the same compressibility and bulk compressibility as instantly claimed." Emphasis added. The Examiner's assumption disregards the fact that Roy et al. requires "high levels of fruit solids" as well as hexametaphosphate as a gel-stiffening agent. The Examiner's argument simply does not provide an adequate basis to support the finding that Roy et al. possesses the same characteristics as the claimed invention, such that claim 81 is not anticipated by Roy et al.

B. Whether claims 10-13, 19, 20, 22, 24, 27, 29-31 and 36 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of U.S. Patent No. 6,309,686 to Zietlow et al.

1) Claims 10-13, 19, 20, 22, 24, 27, 29-31 and 36

a) As discussed above with respect to the § 102 rejection, the Examiner's refusal to accept the February 27, 2008 Affidavits and evidence in support of the Affidavits submitted October 23, 2008 under 37 C.F.R. § 1.131 was in clear error. Therefore, Roy et al. should be removed as a reference such that the § 103 rejection of claim 10 is improper.

b) The Examiner has failed to provide a combination of references that teach or suggest a soft dried aerated confection having a glass transition temperature or springback factor as claimed and, therefore, no prima facie case of obviousness has been proven.

On page 2 of the January 12, 2009 Office Action, the Examiner incorporated by reference the rejection set forth in the January 14, 2008 Office Action. In turn, the January 14, 2008 Office Action incorporates by reference the rejection set forth in the

April 24, 2007 Office Action. Of course, the reasoning in the April 24, 2007 Office Action has been explained in the Advisory Actions of March 17, 2008 and March 25, 2009. Therefore, unless otherwise noted, reference to "the Office Action" should be understood to mean the April 24, 2007 Office Action as modified by the advisory actions.

The Examiner has the initial burden of showing a prima facie case of obviousness. See *In re Kahn*, 441 F.3d 977, 985-86 (Fed Cir 2006). In order to establish a prima facie case of obviousness, each and every limitation of the claims must be considered. See M.P.E.P. § 2143.03 citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). There must be an apparent reason for one of ordinary skill in the art to combine known elements in the fashion claimed by the patent at issue. This analysis should be made explicit. See *KSR International Co. v. Teleflex Inc.*, 127 U.S.1727, 1732 (2007), citing *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006).

As discussed above in reference to the Examiner's § 102 rejection, Roy et al. does not teach or suggest a dried aerated confection having a glass transition temperature or springback factor as claimed. Zietlow '686 also fails to teach or suggest a dried aerated confection having a glass transition temperature or springback factor as claimed such that no prima facie case of obviousness has been proven.

C. Whether claims 16-18, 21, 23, 25, 26 and 33 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of U.S. Patent No. 6,207,216 to Zietlow et al.

a) As discussed above with respect to the § 102 rejection, the Examiner's refusal to accept the February 27, 2008 Affidavits and evidence in support of the Affidavits submitted October 23, 2008 under 37 C.F.R. § 1.131 was in clear error. Therefore, Roy et al. should be removed as a reference such that the § 103 rejection of dependent claims 16-18, 21, 23, 25, 26 and 33 should be removed.

b) The Examiner has failed to provide a combination of references that teach or suggest a soft dried aerated confection having a glass transition temperature or springback factor as claimed, and therefore, no prima facie case of obviousness has been proven.

The Examiner has the initial burden of showing a prima facie case of obviousness. See *In re Kahn*, 441 F.3d 977, 985-86 (Fed Cir 2006). In order to establish a prima facie case of obviousness, each and every limitation of the claims must be considered. See M.P.E.P. § 2143.03 citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). There must be an apparent reason for one of ordinary skill in the art to combine known elements in the fashion claimed by the patent at issue. This analysis should be made explicit. See *KSR International Co. v. Teleflex Inc.*, 127 U.S.1727, 1732 (2007), citing *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006). A factor relevant to motivation to combine or modify the prior art is when the prior art teaches away from the claimed invention. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be led in a direction divergent from the path that the applicant took. *In re Gurley*, 27 F.3d 551, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

As discussed above in reference to the Examiner's § 102 rejection, Roy et al. does not teach or suggest a dried aerated confection having a glass transition temperature or springback factor as claimed. Zietlow '216 also fails to teach or suggest a dried aerated confection having a glass transition temperature or springback factor as claimed. Instead, Zietlow '216 is directed to quick-dissolving dried, **crisp, frangible** aerated confection, which clearly teaches away from a dried soft marshmallow having a softening agent sufficient to provide a glass transition temperature of less than 5°C or the recited springback factor, as is required by the present invention. For example, see column 1, lines 35-36 and column 2, lines 11-16 of Zietlow '216 which states that: "These dried marshmallow pieces exhibit **desirable crisp, frangible eating qualities**...Generally, dried marshmallow pieces soften but do not dissolve upon exposure to cold milk and rapidly loose their **desirable crisp and frangible eating qualities**. Efforts have thus been made at extending the bowl life of dried marshmallow pieces in cold milk, i.e., to

lessen their propensity to soften in cold milk.” Emphasis added. Absent a teaching or suggestion of each element of the claims, no prima facie case of obviousness has been proven.

D. Whether claims 34 and 35 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of Zietlow (‘216) and The Dictionary of Food Ingredients, 4th Edition, to Igoe.

a) As discussed above with respect to the § 102 rejection, the Examiner’s refusal to accept the February 27, 2008 Affidavits and evidence in support of the Affidavits submitted October 23, 2008 under 37 C.F.R. § 1.131 was in clear error. Therefore, Roy et al. should be removed as a reference such that the § 103 rejection of dependent claims 34 and 35 should be removed.

b) The Examiner has failed to provide a combination of references that teach or suggest a soft dried aerated confection having a glass transition temperature or springback factor as claimed, and therefore, no prima facie case of obviousness has been proven.

The Examiner has the initial burden of showing a prima facie case of obviousness. See *In re Kahn*, 441 F.3d 977, 985-86 (Fed Cir 2006). In order to establish a prima facie case of obviousness, each and every limitation of the claims must be considered. See M.P.E.P. § 2143.03 citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). There must be an apparent reason for one of ordinary skill in the art to combine known elements in the fashion claimed by the patent at issue. This analysis should be made explicit. See *KSR International Co. v. Teleflex Inc.*, 127 U.S.1727, 1732 (2007), citing *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006). A factor relevant to motivation to combine or modify the prior art is when the prior art teaches away from the claimed invention. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be led in a direction divergent from the path that the applicant took. *In re Gurley*, 27 F.3d 551, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

As discussed above in reference to the Examiner's § 102 rejection, Roy et al. does not teach or suggest a dried aerated confection having a glass transition temperature or springback factor as claimed. Zietlow '216 also fails to teach or suggest a dried aerated confection having a glass transition temperature or springback factor as claimed. Instead, Zietlow '216 is directed to quick-dissolving dried, **crisp, frangible** aerated confection, which clearly teaches away from a dried soft marshmallow having a softening agent sufficient to provide a glass transition temperature of less than 5°C or the recited springback factor, as is required by the present invention. Additionally, Igoe is used only to show that sucralose is a high intensity sweetener. Thus, none of the combined prior art teaches an aerated confection having the properties of the present invention such that no prima facie case of obviousness has been proven.

E. Whether claims 37 and 39 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Roy et al. in view of Zietlow ('216), Igoe and U.S. Patent No. 4,251,561 to Gajewski.

a) As discussed above with respect to the § 102 rejection, the Examiner's refusal to accept the February 27, 2008 Affidavits and evidence in support of the Affidavits submitted October 23, 2008 under 37 C.F.R. § 1.131 was in clear error. Therefore, Roy et al. should be removed as a reference such that the § 103 rejection of dependent claims 37 and 39 should be removed.

b) The Examiner has failed to provide a combination of references that teach or suggest a soft dried aerated confection having a glass transition temperature or springback factor as claimed, and therefore, no prima facie case of obviousness has been proven.

The Examiner has the initial burden of showing a prima facie case of obviousness. See *In re Kahn*, 441 F.3d 977, 985-86 (Fed Cir 2006). In order to establish a prima facie case of obviousness, each and every limitation of the claims must be considered. See M.P.E.P. § 2143.03 citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496

(CCPA 1970). There must be an apparent reason for one of ordinary skill in the art to combine known elements in the fashion claimed by the patent at issue. This analysis should be made explicit. See *KSR International Co. v. Teleflex Inc.*, 127 U.S.1727, 1732 (2007), citing *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006). A factor relevant to motivation to combine or modify the prior art is when the prior art teaches away from the claimed invention. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be led in a direction divergent from the path that the applicant took. *In re Gurley*, 27 F.3d 551, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

As discussed above in reference to the Examiner's § 102 rejection, Roy et al. does not teach or suggest a dried aerated confection having a glass transition temperature or springback factor as claimed. Zietlow '216 also fails to teach or suggest a dried aerated confection having a glass transition temperature or springback factor as claimed. Instead, Zietlow '216 is directed to quick-dissolving dried, **crisp, frangible** aerated confection, which clearly teaches away from a dried soft marshmallow having a softening agent sufficient to provide a glass transition temperature of less than 5°C or the recited springback factor, as is required by the present invention. Additionally, Igoe is used only to show that sucralose is a high intensity sweetener. Thus, none of the combined prior art teaches an aerated confection having the properties of the present invention such that no prima facie case of obviousness has been proven.

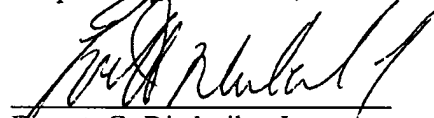
F. Conclusion

Unlike prior art dried marbits which are crisp and frangible, the present invention provides a soft dried aerated confection. The Examiner has failed to provide any prior art reference, or combination of references, that teaches a soft dried marshmallow having the characteristics of the present invention as defined by the required glass transition temperature and springback factor. Certainly the Examiner has failed to provide any reference that addresses the same problem, i.e., providing a soft dried marbit as claimed. Instead, the Examiner states that, because the prior art teaches a similar food product, it must inherently have the same physical characteristics. This unsubstantiated leap in logic

does not provide the requisite support for a prima facie case of obviousness. Regardless, the Examiner's rejections should be withdrawn based on the proof of prior invention set forth in the February 27, 2008 Affidavits and supporting evidence.

For at least the reasons set forth above, the Appellant respectfully submits that the present invention is patentably defined over the prior art of record such that the Examiner's rejections should be reverse and the application passed to issue.

Respectfully submitted,



Everett G. Diederiks, Jr.
Attorney for Applicants
Reg. No. 33,323

Date: June 29, 2009
DIEDERIKS & WHITELAW, PLC
12471 Dillingham Square, #301
Woodbridge, VA 22192
Tel: (703) 583-8300
Fax: (703) 583-8301

VIII. CLAIMS APPENDIX

1. A dried soft aerated confection food product, comprising:
about 65% to 98% of a saccharide component (dry weight basis);
about 0.05 to 15% of a foaming agent;
about 0.5% to 20% of a structuring agent;
1 to 10% moisture,
at least one color,
a density of about 0.1 to 0.35g/cc,
a water activity ranging from about 0.1 to about 0.4,
about 5-25% (dry weight basis) of a softening agent to provide a glass transition temperature of less than 5°C, and
a springback factor of a minimum of 20% and up to 50%.
3. The dried soft aerated confection food product of claim 1 wherein at least a portion of the foaming ingredient is protein based.
4. The dried soft aerated confection food product of claim 3 wherein at least a portion of the foaming ingredient or structuring agent is gelatin.
5. The dried soft aerated confection food product of claim 1 having a glass transition temperature of less than -10°C.
6. The dried soft aerated confection food product of claim 4 wherein both the foaming and structuring ingredient is gelatin.
7. The dried soft aerated confection food product of claim 1 having the ability of a 500 cm³ quantity to compress to 50-85% of the original volume in 5 minutes due to the force imparted by a 1 kg weight.

8. The dried soft aerated confection food product of claim 1 wherein the softening agent is selected from the group consisting of polyglycerols, hydrogenated starch hydrolysates, glycerin, propylene glycol and mixtures thereof.
9. The dried soft aerated confection food product of claim 7 comprising:
about 65 to 98% of a saccharide component; and wherein at least a majority of the saccharide component is sucrose;
about 0.5 to 10% of gelatin;
about 2 to 10% moisture; and,
having a fat content of less than 5%.
10. The dried soft aerated confection food product of claim 8 in the form of shaped pieces each weighing about 0.1 to 10g.
11. The dried soft aerated confection food product of claim 10 in the form of shaped pieces each weighing about 0.1 to 0.2 g.
12. The dried soft aerated confection food product of claim 10 wherein a major portion of the softening agent is glycerin.
13. The dried soft aerated confection food product of claim 11 having a water activity ranging from about 0.2 to 0.3.
14. The dried soft aerated confection food product of claim 8 wherein the softening agent is selected from the group consisting of glycerin, propylene glycol and mixtures thereof.
15. The dried soft aerated confection food product of claim 1 additionally comprising at least one ingredient selected from the group consisting flavor or color ingredients, nutritional fortifying ingredients, and mixtures thereof.

16. The dried soft aerated confection food product of claim 15 wherein the at least one ingredient constitutes a nutritional fortifying ingredient selected from the group consisting of biologically active components, fiber, micronutrients, minerals, and mixtures thereof.
17. The dried soft aerated confection food product of claim 16 wherein the nutritional fortifying ingredient comprises biologically active components selected from the group consisting of nutraceuticals, medicinal herbs, therapeutic or ethical drugs, and mixtures thereof.
18. The dried soft aerated confection food product of claim 16 including sufficient amounts of a calcium ingredient to provide a calcium concentration of about 0.1 to 5%.
19. The dried soft aerated confection food product of claim 1 having a portion is of a second color.
20. The dried soft aerated confection food product of claim 1 wherein the dried soft aerated confection food product is in the form of a phase or portion of a composite food product.
21. The dried soft aerated confection food product of claim 20 wherein the portion is in the form of a topical coating.
22. The dried soft aerated confection food product of claim 20 wherein the portion is in the form of filling.
23. The dried soft aerated confection food product of claim 17 wherein the dried soft aerated confection food product includes at least one vitamin.

24. The dried soft aerated confection food product of claim 20 wherein the dried soft aerated confection food product has at least two phases characterized by different colors, flavors or composition.
25. The dried soft aerated confection food product of claim 17 in the form of a wafer.
26. The dried soft aerated confection food product of claim 25 in the form of a wafer having a thickness of about 1 to 5 mm.
27. The dried soft aerated confection food product of claim 20 wherein the portion is in the form of a peripheral border.
29. The dried soft aerated confection food product of claim 20 wherein the phase or portion is in the form of a core.
30. The dried soft aerated confection food product of claim 29 admixed with a second dry food in particulate form.
31. The dried soft aerated confection food product of claim 30 admixed with a ready-to-eat breakfast cereal.
32. The dried soft aerated confection food product of claim 7 having a springback of 15% of the lost volume within 5 minutes.
33. The dried soft aerated confection food product of claim 8 additionally comprising a high potency sweetener.
34. The dried soft aerated confection food product of claim 33 wherein high potency sweetener includes sucralose.

- 35. The dried soft aerated confection food product of claim 34 wherein the high potency sweetener is present in a concentration ranging from about 0.05% to 1%.
- 36. The dried soft aerated confection food product of claim 1 in admixture with a ready-to-eat cereal.
- 37. The dried soft aerated confection food product of claim 34 wherein the gelatin is 250 Bloom strength.
- 38. The dried soft aerated confection food product of claim 1 having a moisture content of 2.0-2.5%.
- 39. The dried soft aerated confection food product of claim 37 wherein the admixture is in bar form.
- 81. The dried soft aerated confection food product of claim 1 including a bulk compressibility factor of 50%-85%.

IX. EVIDENCE APPENDIX

- 1) Affidavit signed January 15, 2008 and filed February 27, 2008 by Susan L. Kamper.
- 2) Affidavit filed February 27, 2008 by James W. Geoffrion.
- 3) Additional Evidence on reduction to practice signed January 14, 2008 and filed, in affidavit form, on October 23, 2008.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Shimek et al.)		
) Art Unit:	1761	
)		
Serial Number	10/620,038) Examiner:	K. Mahafkey
)	
Filed	July 15, 2003) Atty Docket:	6126US
For:	Soft Dried Marshmallow and Method of Preparation		

AFFIDAVIT/DECLARATION SUBMITTED UNDER 37 C.F.R. 1.131

Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

I, Susan L. Kamper, am an inventor in the above-identified U.S. patent application entitled Soft Dried Marshmallow and Method of Preparation which was filed on July 15, 2003 and is owned by General Mills, Inc..

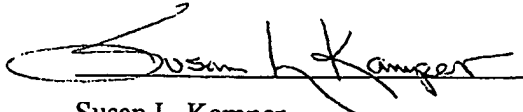
This invention is concerned with a soft, dried marshmallow, particularly marbits that are dry and shelf stable, but quite soft, even when immersed in a cold fluid. In connection with the invention, I was particularly involved on work related to incorporating the marbits into existing products. The invention was conceived in early April 2002. Samples were made later that month. In the summer of 2002, tests were conducted with potential consumers (kids) to determine product appeal. I am directly aware of product samples made of the invention prior to the consumer testing.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under *section 1001 of title*

Affidavit Submitted Under 37 C.F.R. 1.131
Serial No. 10/620,038
Page 2

18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 1/15/08


Susan L. Kamper

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Shimek et al.)		
) Art Unit:	1761	
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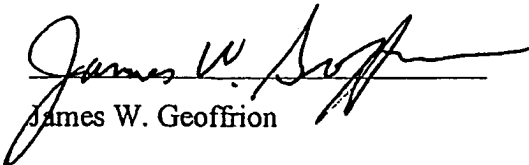
As evidenced by the attached invention record materials, the main invention was conceived at least as early as April 2, 2002 and presented for internal company patent consideration on August 7, 2002. In addition, the invention was reduced to practice by the mid April 2002 and was, in fact, slated for a consumer test on August 6, 2002 as also evidenced by the attached invention record materials.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under *section 1001 of title*

Affidavit Submitted Under 37 C.F.R. 1.131
Serial No. 10/620,038
Page 2

18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 1/14/2008


James W. Geoffrion

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Sir:

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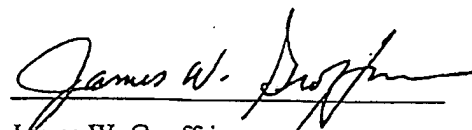
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under *section 1001 of title*

Affidavit Submitted Under 37 C.F.R. 1.131
Serial No. 10/620,038
Page 2

18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 1/14/2008


James W. Geoffrion

Batcher 33-44

PRODUCT DEVELOPER'S
NAME:

Andrew Peterson

DATE/EXP. NO. (9)

PROJECT NAME

Chewy Marbets

TEST LOCATION W16

BACKGROUND:

Glycerin gives a soft chewiness to marbets but may
give too much stickiness and toothpaste. Fat makes
cheeses - eating) marbets.

PURPOSE/OBJECTIVE:

Combine best levels of fat
and glycerin.

PROCEDURE:

Make series of different glycerin levels.
Boil to 250°F. (See explanation) Foam is made
and inject oil. Pass through state mixer.

OBSERVATIONS/CONCLUSIONS:

Good combination! many
promising) samples.

Oil does seem to leak out a bit.

NEXT STEPS:

Try to emulsify the fat.
Talk to Jim Laggan for advice.

SIGNATURE:

Andrew Peterson

DATE:

BATCH SHEET

Product: Marbits Batch: 33 - 44
 Date: 4/17/02 Purpose: Adding fat & glycerin
 Requestor: A. Peterson See next page.

Base Slurry:		Size:	25	11340
Code	Name	%	lb	g
	Sugar Slurry	93.95	23.49	10653.93
	Hydrated Gelatin	6.05	1.51	686.07
TOTAL		100.00	25.00	11340.00

Sugar Slurry:		Size:	23.4875	10653.93
Code	Name	%	lb	g
20-4176	EFG Sugar	57.91	13.60	6170.00
20-4030	Corn Syrup 42DE	12.09	2.84	1288.49
20-4040	Dextrose	11.47	2.69	1222.22
20-1000	Water	18.52	4.35	1973.22
TOTAL		100.00	23.49	10653.93

Hydrated Gelatin:		Size:	1.51	686.07
Code	Name	%	lb	g
20-3800	Gelatin #10 (pork)	32.82	0.50	225.19

10653.93
 686.07
 11340.00

Plan:

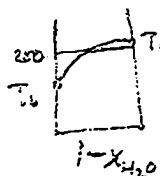
Best fat level: $\frac{\text{ml/total}}{51\text{ml}/216\text{g}}$ $\frac{\text{ml/g foam base}}{0.235111}$ $\frac{51/(216-51)}{0.309091}$
 Best glycerin level: 10%

Fat	ml/g bas	glycerin		
		6.7%	10%	15%
	0	32	33	41
	0.2051	40	34	42
	0.3091	39	35	43
	0.4638	38	36	44

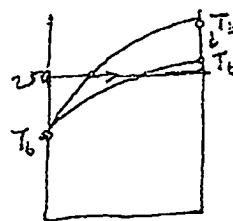
- Add glycerin directly to slurry prior to boiling.
 Boil to 250°F.

theory:

Phase Diagram



→ All glycerol



WE got a more concentrated slurry from glycerol boiling point reduction.

Analysis:

37 slurry: 11.8%

41 slurry: 14.7%

Obviously didn't work.

33 slurry 12.2%

- Add oil in-line post aerator. Put through 2 static mixers.

GENERAL MILLS, INC.

INTRA-COMPANY CORRESPONDENCE

To Andy Peterson At JFB
 Jim Geoffrion JFB
 Bernhard VanLengerich JFB
 Phil Zietlow JFB

From Lance Sanders At JFB Date 08/7//2002

Subject Invention Record No. 6126
 Title: SOFT AND CHEWY MARBITS

This memo will acknowledge receipt of the above Invention Record, which has been given the indicated Invention Record docket number and has been assigned to John O'Toole.

The Invention Record will be processed in the usual manner and Global Cereal Patent Review Board meeting. At the Board meeting the next steps for the Invention Record will be determined, inventors will be invited to the Board meeting.

To be patentable, an invention must have "novelty." Generally, to be novel, a new invention must not already be in the public domain. Inventions generally are placed in the public domain either through third parties or by the inventor who might have commercially used, shown, or disclosed the invention to third parties (i.e. consumer test, concept test, vendor, advertising agency, product sale). In the U.S. a patent application must be filed within one year of the invention being placed in the public domain. In most countries a grace period does not exist, hence once the invention is placed in the public domain patent rights in those countries are lost immediately. If you know this invention has been or will be placed in the public domain, please notify Lance Sanders.

If you have any questions, please feel free to contact Lance Sanders or the attorney listed above. Please refer to the Invention Record docket number in future correspondence.

cc: Law Department MGO
 Mark Widner JFB
 Danny Strickland JFB
 Peter Erickson JFB

LTS/ch
Attachments

<u>Sample</u>	<u>Dry time</u>	<u>Moisture</u>	<u>sw</u>
33-60	60	3.07%	0.171
34-60	60	1.16%	0.101
35-60	60	1.56%	0.114
36-60	60	1.87%	0.131
37-60	60	8.03%	0.138
38-60	60	5.88%	0.136
39-60	60	4.99%	0.154
40-60	60	5.67%	0.13
41-60	60	12.90%	0.154
42-60	60	12.30%	0.14
43-60	60	4.40%	0.162
44-60	60	3.20%	0.134

INVENTION RECORD General Mills, Inc. and Affiliated Companies

This form is for the reporting of any new thing which might be patentable. This form will be reviewed by the JFB Patent Liaison (Annette Frawley, JFBTC -- 2014, 612-764-4158), who will review it and assign a permanent case number. It is not a request for, or authorization of, any patent work. Its purpose is to direct attention to and make a record of new discoveries. The Patent Section (or Patent Administrator) will acknowledge receipt of this form.

INVENTION RECORD CASE NBR: 6126

TITLE: Soft and Chewy Marbits

CATEGORY: Cereal/Grain Snack Base Technology

INVENTION TYPE:

A product formulation or a composition

DESCRIPTION OF SUBJECT MATTER

A range of marbits (marshmallow bits) that stay soft and/or chewy in cereal. Standard marshmallows will transfer moisture to cereal pieces--causing staling of the marshmallows and/or sogginess of the cereal pieces. These marshmallows are soft or chewy at the low water activity (~.25) of cereal.

1. Advantages over previous practices in this field

It provides marbits with a texture similar to real marshmallows--not previously possible at the water activity of cereal (aw ~ .25).

2. Detailed description of the invention.

These marbits are based on our standard marbit foam, but have functional ingredients added to modify the texture and keep those properties at low water activities. The classes of functional ingredients used are:

1. Humectants - lower the water activity and increase moisture retention in low water activity formulas.
2. Plasticizers - soften marbits similar to water without evaporating.
3. Lubricants - give a delicateness to the product and reduce toothpack.

Examples of functional ingredients and their range of use levels in these categories:

1. Glycerol (3-10% of formula), Fructose (25-100% of sugars), Sorbitol (~10% of formula), Propylene Glycol (~10% of formula)
2. Glycerol (up to 10% of formula)
3. Soy oil (up to ~30% of formula), Shortening (similar level as oil) (with and without emulsification)

Glycerol works particularly well because of its dual role as humectant and plasticizer.

The humectants and plasticizers are added to the final slurry prior to aeration of the marbit. The oils cannot be added prior to aeration as they will interfere with the gelatin's ability to

foam. Oils are instead injected inline after aeration and mixed in via a static mixer. Marbits that have softness, chewiness, etc.

3. Variants or equivalents.
Described in earlier section.

4. Has this subject matter been made available in any way to persons outside of the Company?
1. By submission of samples? Or consumer test? Yes
Note consumer test has not yet occurred but will occur next Tuesday, August 6, 2002 in an employee's kids panel.
 2. By printed publication? No
 3. Via Tradeshow, Technical Seminars or Conferences No
 4. By discussions with third party sources No
 5. By other written or verbal disclosures No
5. Has the thing or idea which you have described in this record been?
1. Tried experimentally? No
 2. Used in Company operations? No
 3. Sold or offered for sale? No

Divisional Marketing Research Contact:

6. When did the described subject matter first occur to you? Or to the originator, if you are not the originator? April 2, 2002
7. First disclosure information: At 4/2 meeting between Jim Geoffrion, Bernhard Van Lengerich, Phil Zietlow, and myself. Various approaches were discussed prior to experimentation.
8. On what Company projects and/or outside contracts were you working when this subject matter was: None
9. Prior Art:
- a) Known Patents: No
 - b) Patent Applications: No
 - c) Company Literature: No
 - c) Other corporation R&D: No
 - d) Competitive products: No
 - e) University R&D: No
 - f) Foreign R&D: No
 - g) Prior Invention Records: No
 - h) Product(s) that the invention was developed for:

Inventor's names and Phone numbers will appear below after a Docket Number is assigned.

Inventor Name	Phone	Department	CitizenShip/Company
<u>Andy Peterson</u>	763-764-2124	Extrusion 1	U.S.
andrew.peterson@genmills.com		U.S.	
jim.geoffrion@genmills.com		U.S.	
bernhard.vanlengerich@genmills.com		U.S.	

andrew.peterson@genmills.com; jim.geoffrion@genmills.com; bernhard.vanlengerich@genmills.com;
phil.zietlow@genmills.com

General Mills, Inc. C O N F I D E N T I A L

WITNESSES:I(We) are not co-inventors and I(We) am(are) technically qualified to understand the subject matter. I (We) have read this invention record (including the attached pages, if attached) and understand it's subject matter.

Signature: Cecil J. Harms Date: 7/31/02
Signature: Lance T. Sanders Date: 8/1/2002

General Mills, Inc. C O N F I D E N T I A L

CONFIDENTIAL

RECEIVED

JUL 31 2002

GENERAL MILLS INC
JFB TECHNICAL CENTER

X. RELATED PROCEEDING APPENDIX

Not Applicable